

> **Recalculate** or pressing *F9*, or on any input event. An understanding of volatile functions is important especially if you create a large spreadsheet, where frequent recalculations may adversely affect performance. Make sure that you design your spreadsheet to use volatile functions appropriately.

The following Calc functions are volatile:

- FORMULA
- INDIRECT
- INFO
- NOW
- OFFSET
- RAND
- RANDBETWEEN
- TODAY

For the RAND and RANDBETWEEN functions, Calc provides non-volatile equivalents – RAND.NV and RANDBETWEEN.NV. These may be useful when you do not require the function values to update so frequently. A non-volatile function is not recalculated at new input events and does not recalculate when selecting **Data > Calculate > Recalculate** or pressing *F9*, except when the cell containing the function is selected. Non-volatile functions are recalculated when opening the file.

Using wildcards and regular expressions in functions

Calc supports the use of regular expressions or wildcards in the arguments of many of its functions.

Regular expressions offer the most powerful method of searching for text strings. For more information about regular expressions, including examples, see the section entitled “Regular expressions” in Chapter 1, Introduction.

If interoperability with Microsoft Excel is important for your spreadsheet, then you may not be able to fully utilize Calc’s regular expression facilities because Excel does not provide equivalent facilities. Hence, when you export a Calc spreadsheet to Excel format, information relating to regular expressions will not be usable within Excel. In this case you can use the less powerful wildcards facility provided by Calc because spreadsheets that utilize wildcards can be exported to Excel format without loss of data. A wildcard is a special character that represents one or more unspecified characters. Wildcards make text searches more powerful, but often less specific. The wildcards available are ? (question mark), * (asterisk), and ~ (tilde). The usage of these wildcards is the same as that for the Find and Replace dialog, described in Section 2, Entering, Editing, and Formatting Data.

The following Calc functions allow the use of wildcards or regular expressions:

- Database functions (DAVERAGE, DCOUNT, DCOUNTA, DGET, DMAX, DMIN, DPRODUCT, DSTDEV, DSTDEVP, DSUM, DVAR, DVARP)
- AVERAGEIF, AVERAGEIFS, COUNTIF, COUNTIFS, MAXIFS, MINIFS, SUMIF, SUMIFS
- HLOOKUP, LOOKUP, VLOOKUP
- MATCH
- REGEX (not applicable for wildcards)
- SEARCH